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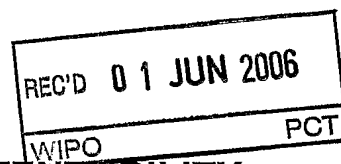WIPO   PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P4645.PC/PDW	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/GB2005/000610	International filing date *(day/month/year)* 18.02.2005	Priority date *(day/month/year)* 19.02.2004

International Patent Classification (IPC) or national classification and IPC INV. G06F9/445 G06F9/44

Applicant QUALCOMM CAMBRIDGE LIMITED et al.

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *sent to the applicant and to the International Bureau)* a total of 4   sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))   , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I   Basis of the report

   ☐ Box No. II   Priority

   ☐ Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   ☐ Box No. IV   Lack of unity of invention

   ☒ Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   ☐ Box No. VI   Certain documents cited

   ☐ Box No. VII   Certain defects in the international application

   ☐ Box No. VIII   Certain observations on the international application

Date of submission of the demand 02.02.2006	Date of completion of this report 30.05.2006
Name and mailing address of the international preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized officer Carciofi, A Telephone No. +31 70 340-3695

Box No. I   Basis of the report

1. With regard to the **language,** this report is based on

    ☒   the international application in the language in which it was filed

    ☐   a translation of the international application into , which is the language
        of a translation furnished for the purposes of:
        ☐ international search (under Rules 12.3(a) and 23.1(b))
        ☐ publication of the international application (under Rule 12.4(a))
        ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

    Description, Pages

    1-25   as originally filed

    Claims, Numbers

    1-15   as amended (together with any statement) under Art. 19 PCT

    Drawings, Sheets

    1/5-5/5   as originally filed

    ☐   a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐   The amendments have resulted in the cancellation of:
        ☐ the description, pages
        ☐ the claims, Nos.
        ☐ the drawings, sheets/figs
        ☐ the sequence listing *(specify)*:
        ☐ any table(s) related to sequence listing *(specify)*:

4. ☐   This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
        ☐ the description, pages
        ☐ the claims, Nos.
        ☐ the drawings, sheets/figs
        ☐ the sequence listing *(specify)*:
        ☐ any table(s) related to sequence listing *(specify)*:

    *   *If item 4 applies, some or all of these sheets may be marked "superseded."*

Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-15
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-15
Industrial applicability (IA)	Yes:	Claims	1-15
	No:	Claims	

2. Citations and explanations (Rule 70.7):

   see separate sheet

Re Item V
Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following document:

    D1: BAILEY E C: "Maximum RPM - Taking the Red Hat Package Manager to the Limit" RPM DOCUMENTATION, June 1998 (1998-06), pages 3-13, 16-18, 33, 52, 200, 237-239, XP002351753

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not inventive in the sense of Article 33(3) PCT.

2.1. Document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and it discloses the following features thereof (within parentheses are the passages applying to this document and the terminology used therein).

    A method of provisioning a program *to a device* (package management)*, the method comprising the steps of*
    a) creating a container (package)*, the container comprising:*
    > *executable code for a* program (program files)*; one or more content resources for use in the* program (data files) *and metadata relating to the or each content resource* (documentation, configuration information, files' permissions)*, the executable code, the or each content resource and the metadata being stored as serialised objects within the container* (page 4, line 32 - page 5, line 10; page 12, line 5 - page 13, last line);
    b) transmitting the container to one or more devices (obtaining the package from a remote site)(page 18, lines 9-14);
    c) extracting the contents of the container at the or each device (installing the package)(page 16, lines 4-12).

2.2. The subject-matter of claim 1 therefore differs from this method known from document D1 in that in the claimed method:

- the device is a *mobile* device, whereas in document D1 it is a generic computing device;

- a *user interface* is provisioned and the container comprises *executable code for a user interface*, whereas in document D1 it is for a generic program;

the following step is moreover defined

- *d) executing the code to generate a user interface for the mobile device.*

2.3. As to the first differing feature (i.e. mobile device), its presence cannot be considered as involving an inventive step, a mobile device being regarded as merely one of the equally likely possible target platforms (i.e. fixed or mobile computing devices) which would be selected by the skilled person and which he would apply to the method disclosed in D1.

As to the second differing feature (i.e. user interface), although document D1 does not explicitly address the management of packages specific for user interfaces, it is clear that selecting, as the program contained in the package, one which would generate a user interface, is merely one of the equally likely possibilities from which the skilled person would select, without exercising any inventive activity, and which he would apply to the method disclosed in D1; moreover, document D1 suggests that the content of a package could be the product XFree86 (page 52, lines 9-10), a well known implementation of the X Window System, which includes a graphical user interface.

As to the third differing feature (i.e. executing the code), it is regarded as being a logical consequence to the installation and its presence, therefore, obvious to the skilled person.

The skilled person would therefore find obvious to apply the above mentioned features to the teaching of claim 1, thus arriving at a method as claimed.

2.4. The subject-matter of claim 1, therefore, does not involve an inventive step (Art. 33(3) PCT).

The subject-matter of claims 6, 8, 9, 12 and 13 does also not involve an inventive step (Art. 33(3) PCT), given the ample similarity of the subject-matter of said claims with that of claim 1.

2.5. As to dependent claims 2-5, 7, 10-11 and 14-15, their subject-matter is also regarded as being not inventive (Art. 33(3) PCT), the additional features defined therein being either already disclosed in document D1 or their presence being obvious to the skilled person (see also the citations in the International Search Report).

CLAIMS

1. A method of provisioning a user interface to a mobile device, the method comprising the steps of

a) creating a container, the container comprising: executable code for a user interface; one or more content resources for use in the user interface; and metadata relating to the or each content resource, the executable code, the or each content resource and the metadata being stored as serialised objects within the container;

b) transmitting the container to one or more mobile devices;

c) extracting the contents of the container at the or each mobile device; and

d) executing the code to generate a user interface for the mobile device.

2. A method according to claim 1, wherein the metadata comprise data determining access to the executable code and/or the or each content resource to prevent unauthorised access to the executable code and/or the or each content resource during step (a).

3. A method according to claim 1 or claim 2, wherein if during step a) the executable code and/or a content resource is altered, the metadata is updated accordingly.

4. A method according to any preceding claim wherein, the metadata relating to the or each content resources relates to one or more hierarchical classifications, the hierarchical

classification(s) relating to the capabilities of a mobile device.

5. A method according to any preceding claim, further comprising the step of

e) processing the container contents into a format for transmission to a mobile device, step e) being performed subsequent to step a) and prior to step b).

6. A server for provisioning a user interface to one or more mobile devices, the server comprising:

storage means to receive a data container;

editing means to enable the data container to be edited, in use the data container comprising executable code for a user interface; one or more content resources for use in the user interface; and metadata relating to the or each content resource, the executable code, the or each content resource and the metadata being stored as serialised objects within the data container; and

transmission means for transmitting a data container to one or more devices.

7. A server according to claim 6, wherein the server further comprises a processing means configure, in use, to process a data container prior to transmission of a data container to one or more mobile devices.

8. A data carrier comprising computer executable code for performing the method of any of claims 1 to 5.

9. A method of installing a user interface in a device, the method comprising the steps of:

a)   receiving at a mobile device a container over a
communications network, the container comprising: executable
code for a user interface; one or more content resources for
use in the user interface; and metadata relating to the or
5   each content resource, the executable code, the or each
content resource and the metadata being stored as serialised
objects within the container;

b)   extracting the contents of the container at the
mobile device; and

10   c)   executing the code to generate a user interface for
the device.

10. A method according to claim 9, wherein the metadata
comprises data determining access to the executable code
15   and/or the or each content resource to control access to the
executable code and/or the or each content resource during
step (b).

11. A method according to claim 10, wherein the access-
20   determining metadata can be updated in response to receiving
a control message from the communications network.

12. A data carrier comprising computer executable code for
performing the method of any of claims 9 to 11.
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13. A mobile device comprising a display, a user interface,
storage means, processing means and a communication
interface, the mobile device being configured, in use, to
receive a data container from a communications network
30   via the communications interface;
store the data container in the storage means;

AMENDED SHEET

process the data container using the processing means to extract the contents of the data container, the data container comprising executable code for a user interface; one or more content resources for use in the user interface;
5   and metadata relating to the or each content resource, the executable code, the or each content resource and the metadata being stored as serialised objects within the data container;

form a user interface in accordance with the extracted
10 contents of the data container; and

display the user interface in the device display.

14. A mobile device according to claim 13, wherein the metadata stored in the storage means comprises data
15 determining access to the executable code and/or the or each content resource to control access to the. executable code and/or the or each content resource.

15. A mobile device according to claim 14, wherein the
20 device is further configure, in use, to receive control commands from the communications network via the communications interface, the control commands updating the metadata that determines access to the code and/or content resource(s).